

FIG. 1 Aggregate Particle Size Response of Control and Biotinylated Perfluorocarbon Emulsions to Titrated Levels of Avidin

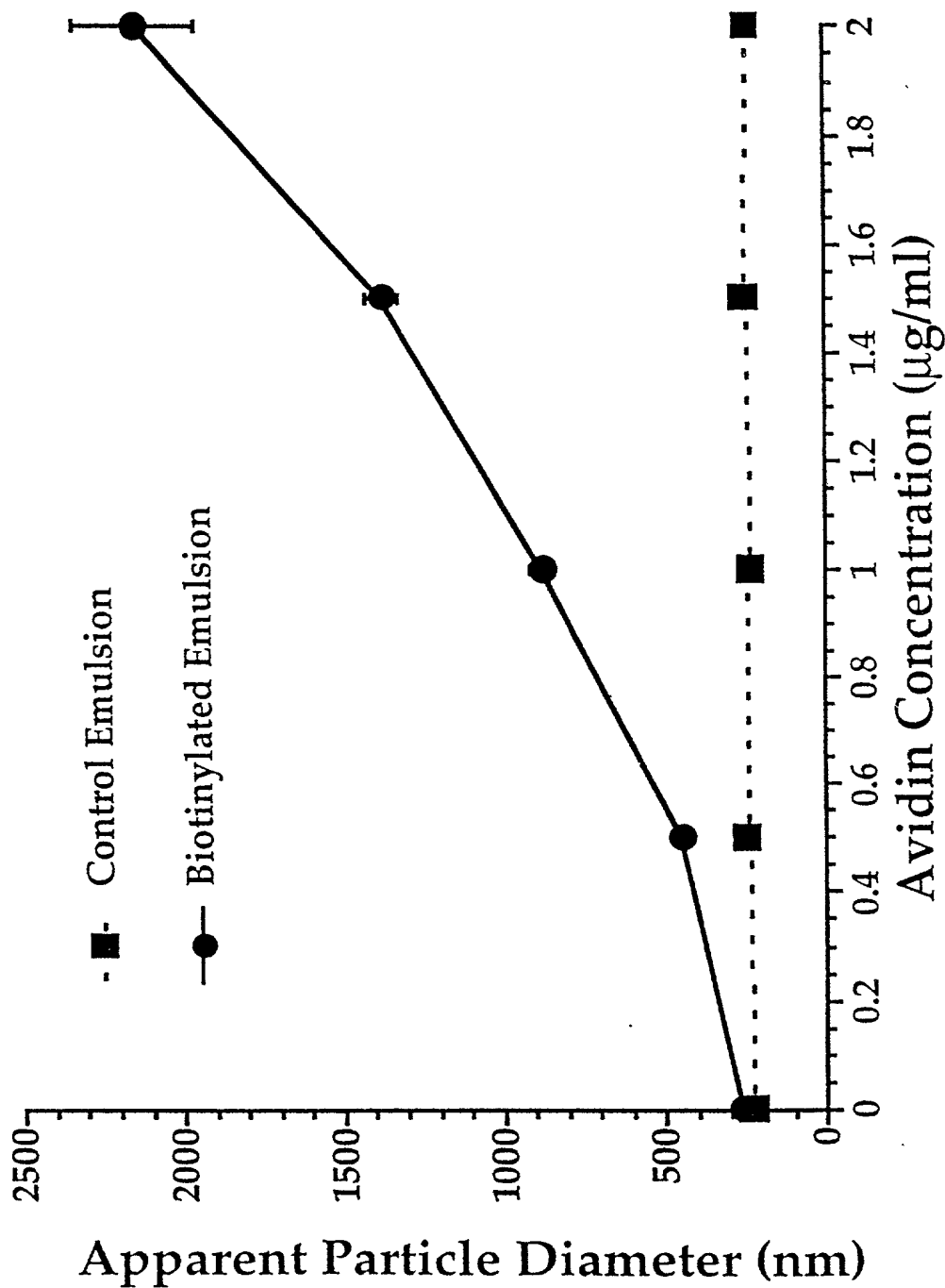


FIG. 2 ULTRASONIC IMAGES OF CONTROL AND BIOTINYLATED
PERFLUOROCARBON EMULSION BEFORE AND AFTER
THE ADDITION OF AVIDIN

CONTROL EMULSION BIOTINYLATED EMULSION

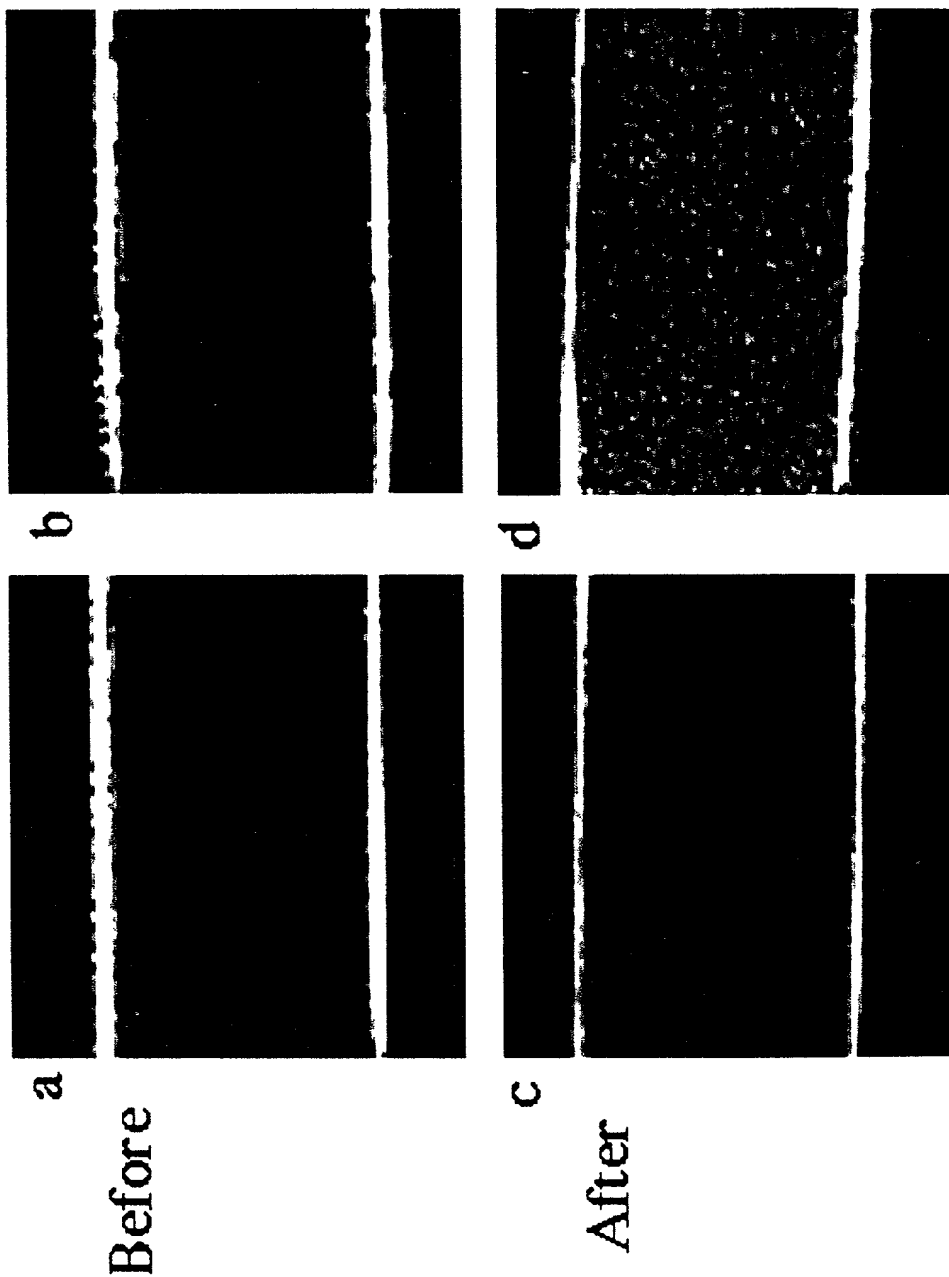


Figure 3. Graphic Illustration of Dialysis Tubing Images and Region of Interest Placement for Gray Scale Analysis

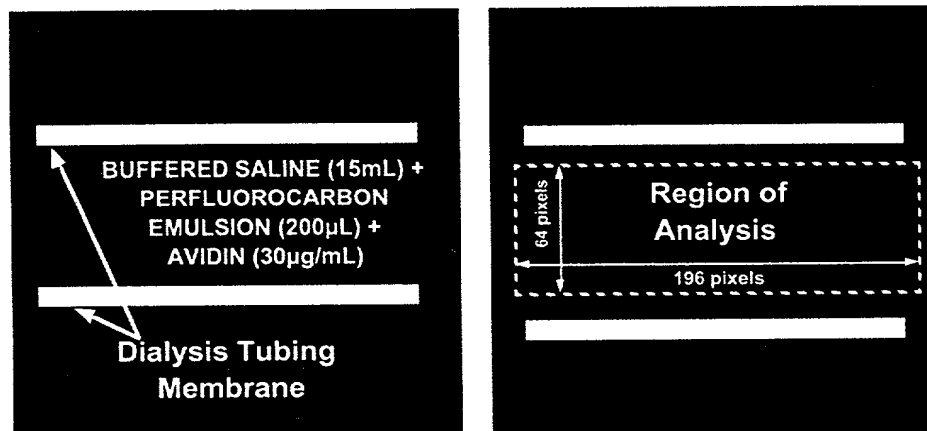


FIG.4 Changes in Average Pixel Gray Scale Associated with the Addition of Avidin to Control or Biotinylated Perfluorocarbon Emulsion

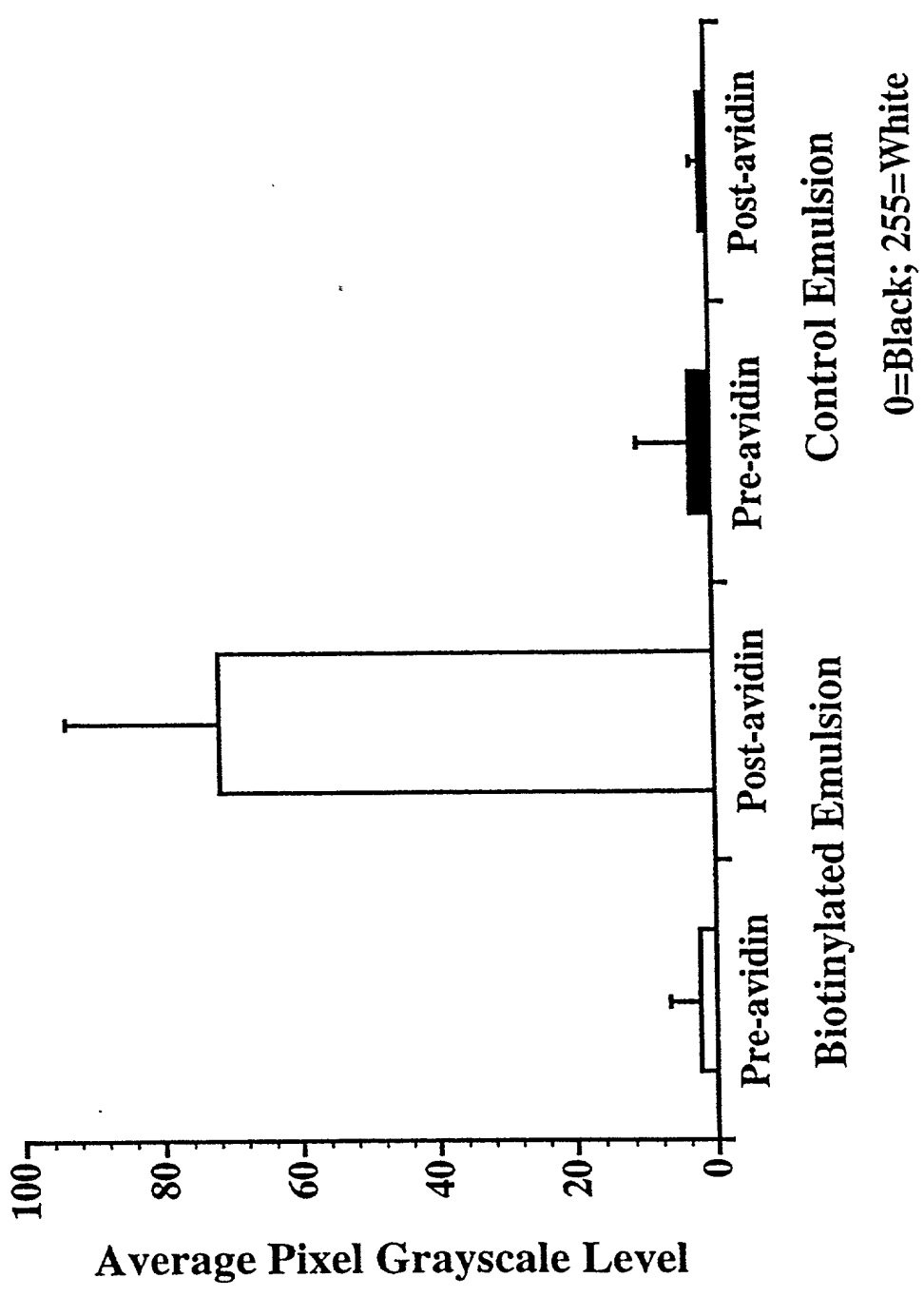


FIG.5 The Effect of Control and Biotinylated Perfluorocarbon Emulsion on Apparent Backscatter Transfer Function and Integrated Backscatter of Avidinized Nitrocellulose Membranes

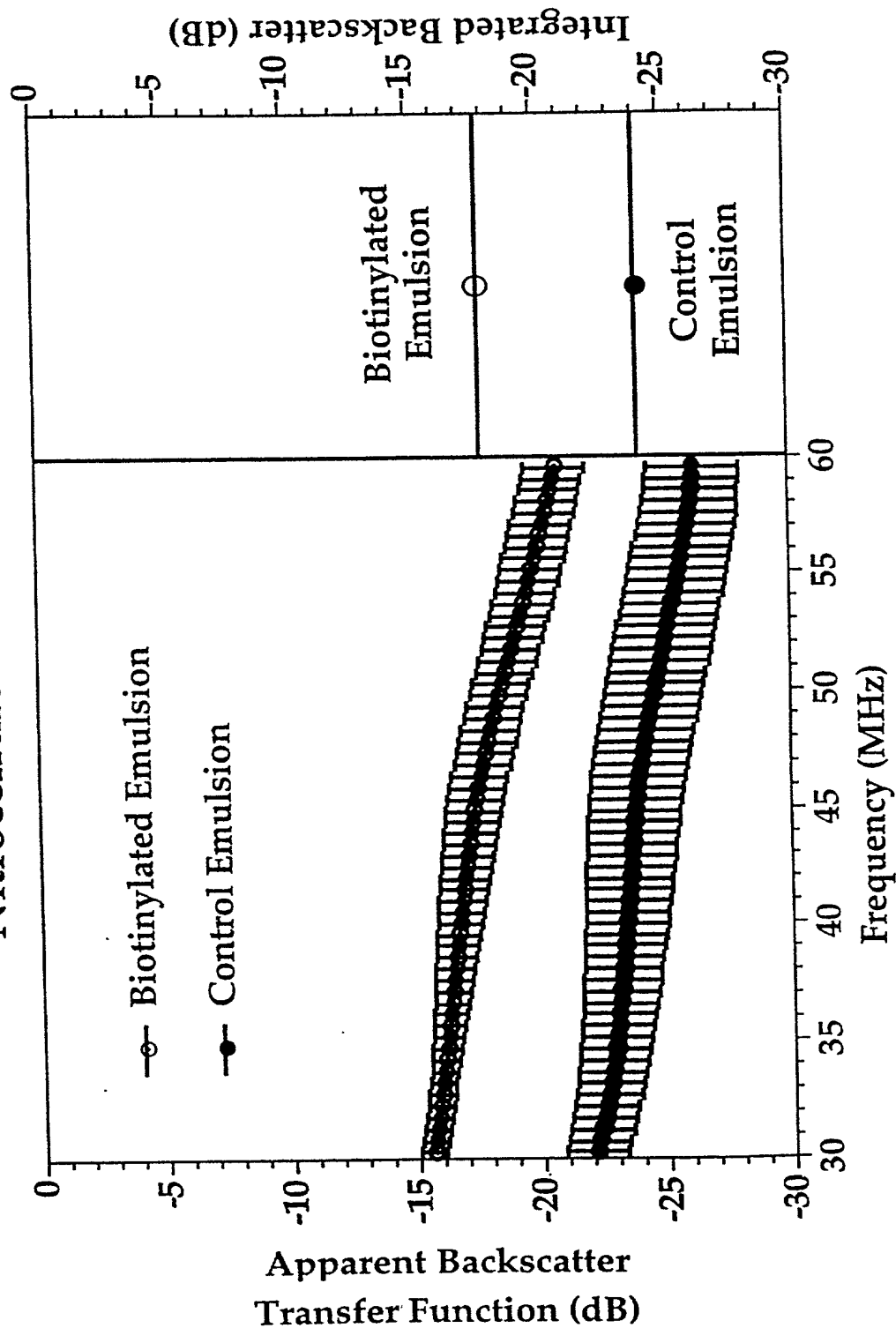


FIG.6 Apparent Backscatter Transfer Function of
Biotinylated and Control Perfluorocarbon Emulsions
Targeted to D-dimer Covalently Conjugated to
Nitrocellulose Membranes

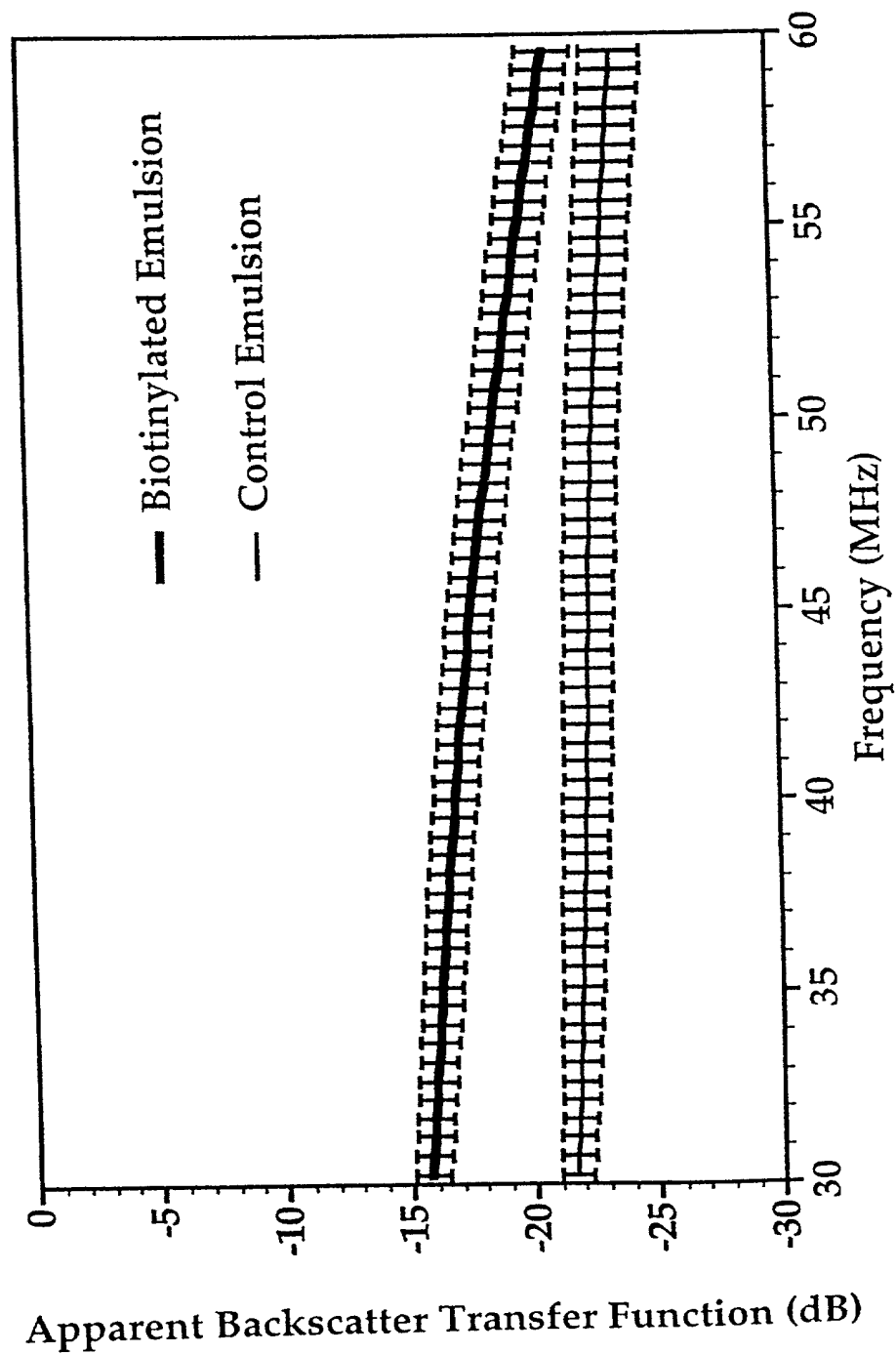


FIG. 7 Apparent Backscatter Transfer Function (dB) of Biotinylated and Control Perfluorocarbon Emulsions at Low Ultrasonic Frequencies

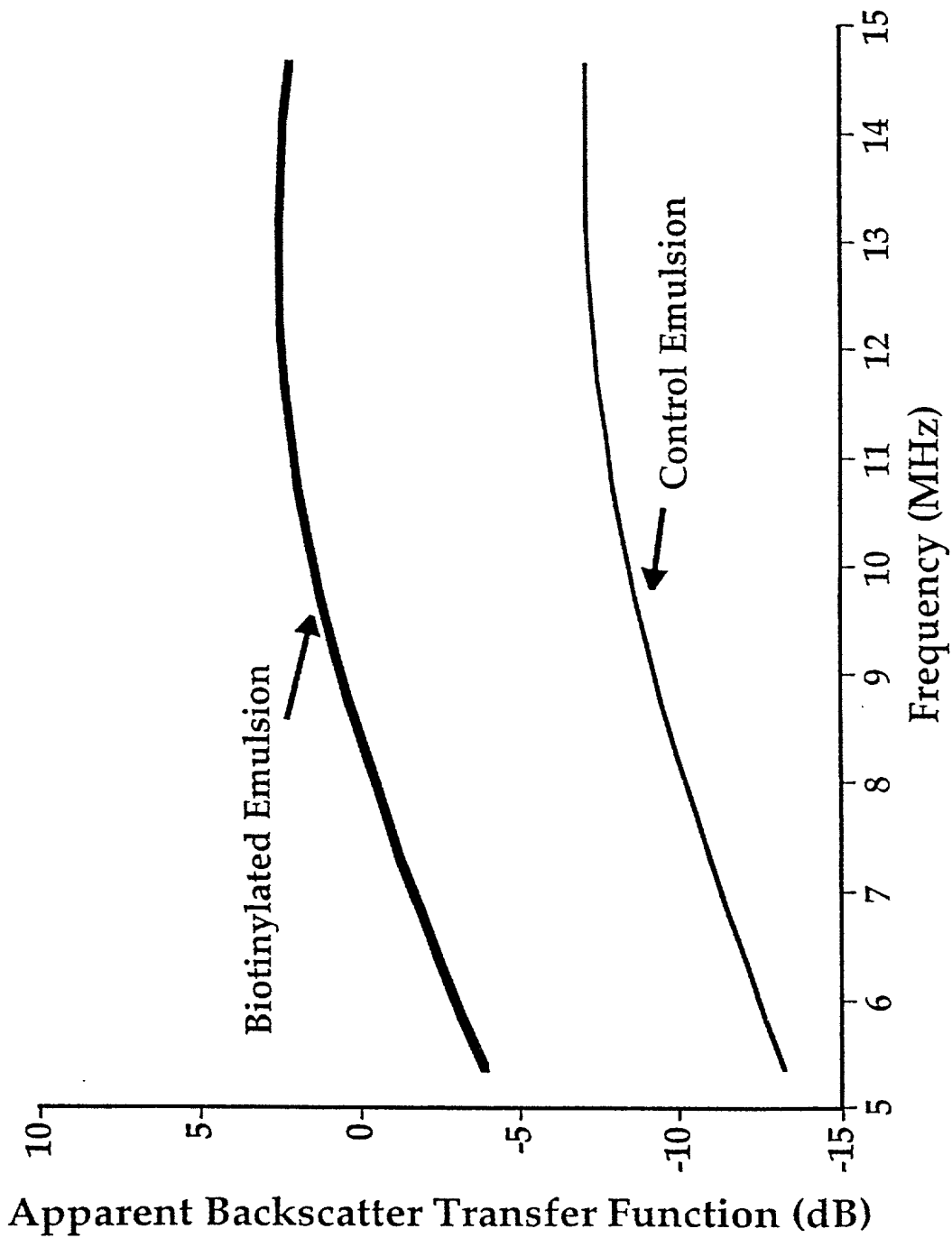


FIG. 8 Apparent Backscatter Transfer Function of Biotinylated and Control Perfluorocarbon Large Particle Size Emulsions Targeted to Avidinized Nitrocellulose Membranes

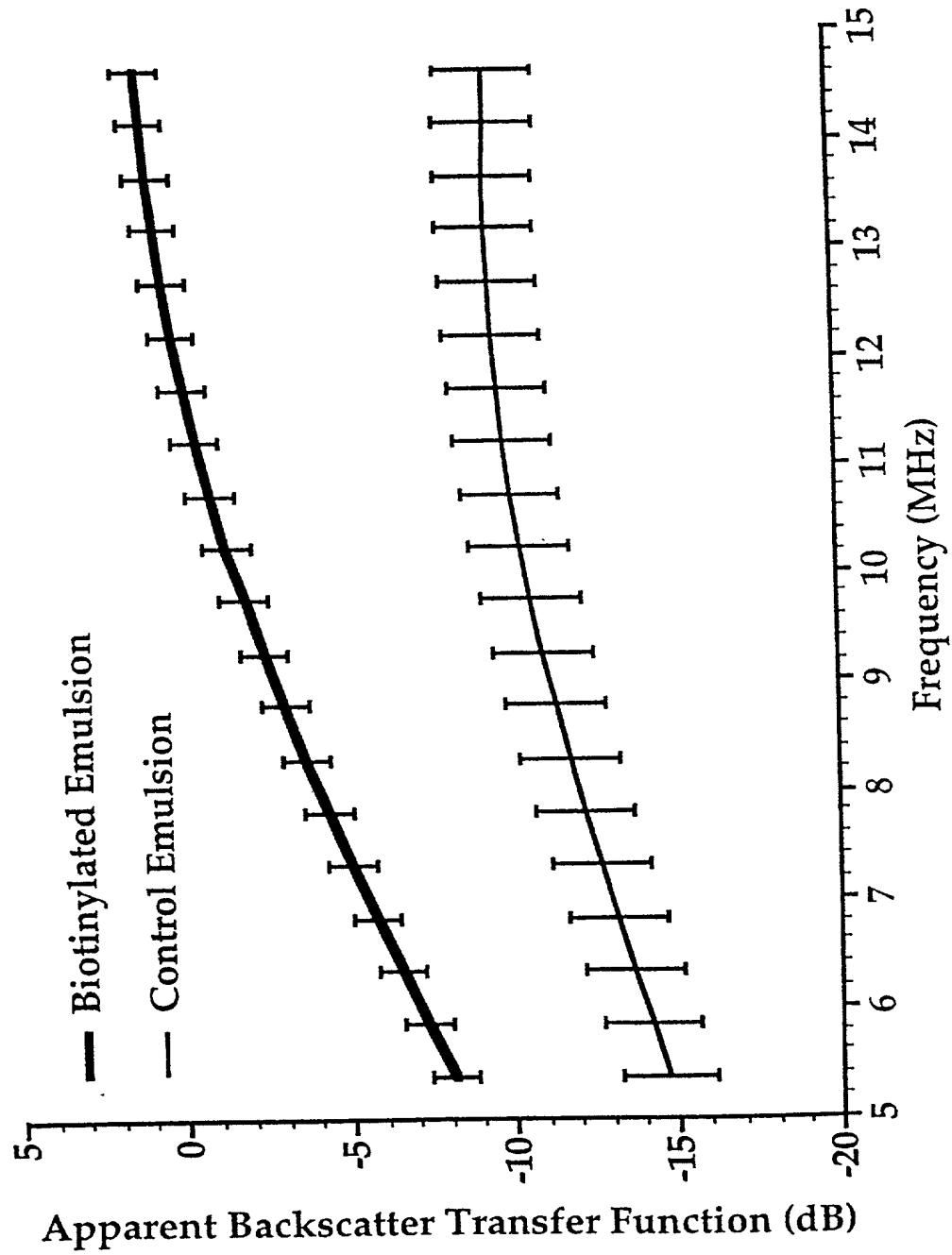
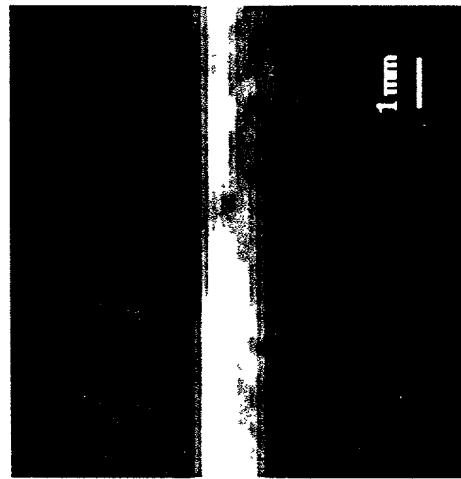
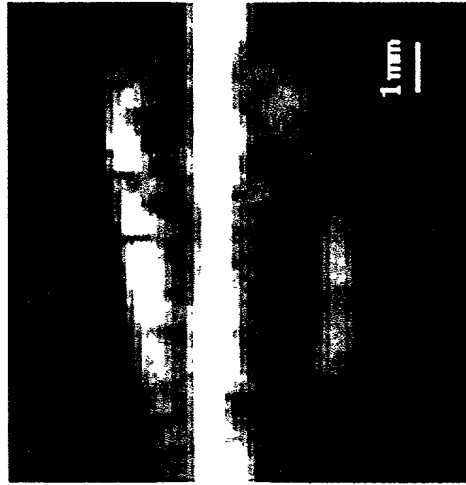


Figure 9. Ultrasonic Images (7.5 MHz) of Plasma Thrombi
Pre-targeted with Antifibrin Monoclonal Antibody and
Exposed to Control or Biotinylated Perfluorocarbon
Emulsion *in Vitro*



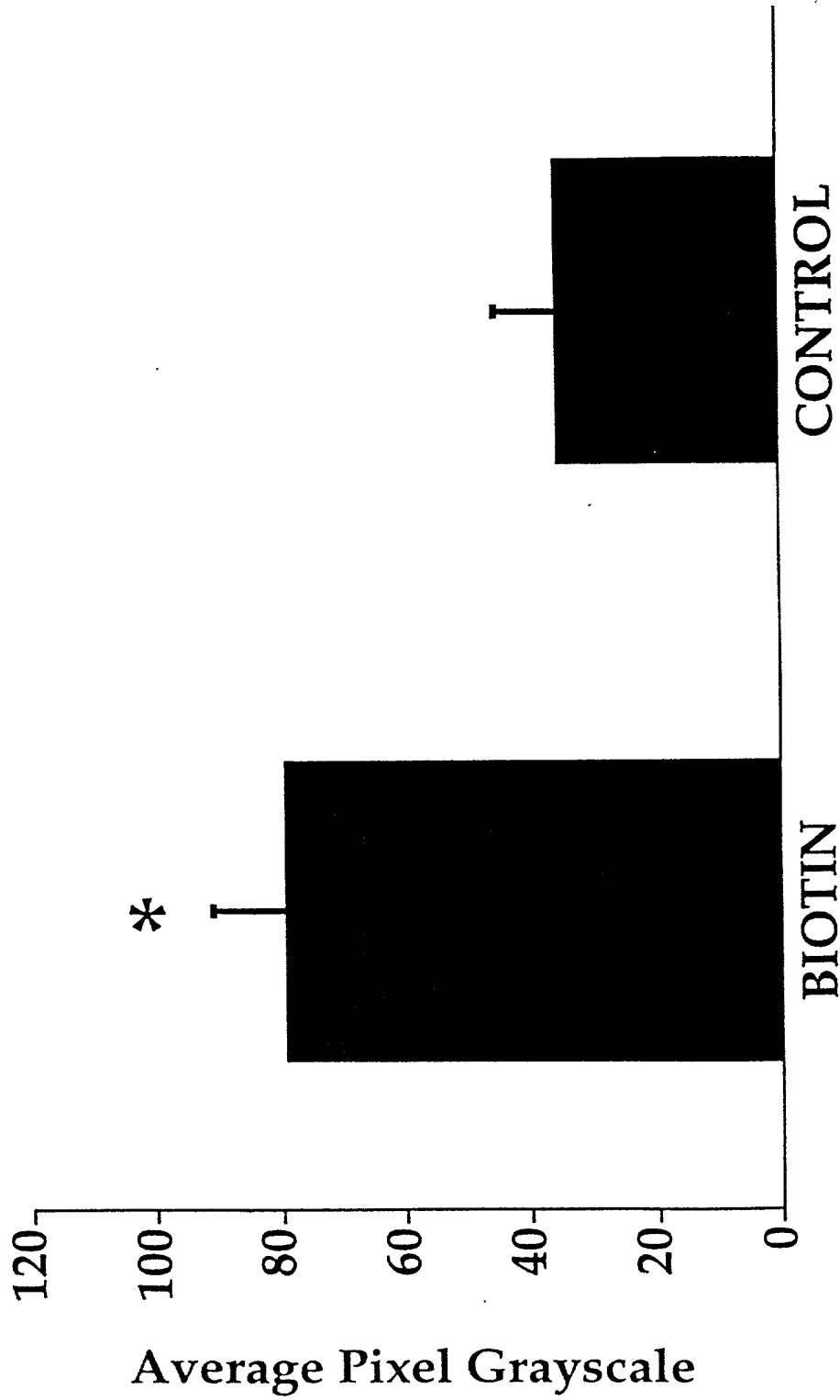
Control Emulsion



Biotinylated Emulsion

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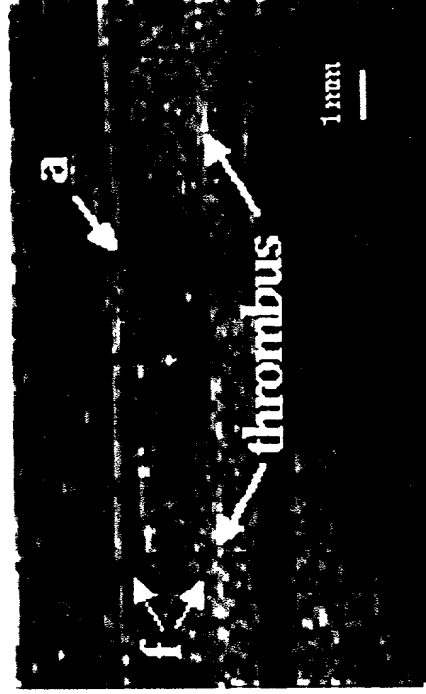
FIG. 10 Average Pixel Grayscale of Plasma Thrombi
Pre-targeted with Antifibrin Monoclonal Antibody and
Exposed to Control or Biotinylated Perfluorocarbon Emulsion



**Figure 11. Femoral Artery Thrombus Acoustically
Enhanced with Biotinylated Perfluorocarbon
Emulsion *In Vivo***



**Thrombus Before Targeted
Biotinylated Contrast**



**Thrombus After Targeted
Biotinylated Contrast**

**Imaged with HP Sonos 2500
7.5 MHz Focused, Linear Phased Array Transducer**

Key: a=electrical anode; f=femoral artery walls

FIG. 12 Net Change in Apparent Backscatter Transfer Function of Biotinylated and Control Perfluorocarbon Emulsions Targeted to Prostate Specific Antigen in Prostatic Carcinoma Relative to Normal Regions

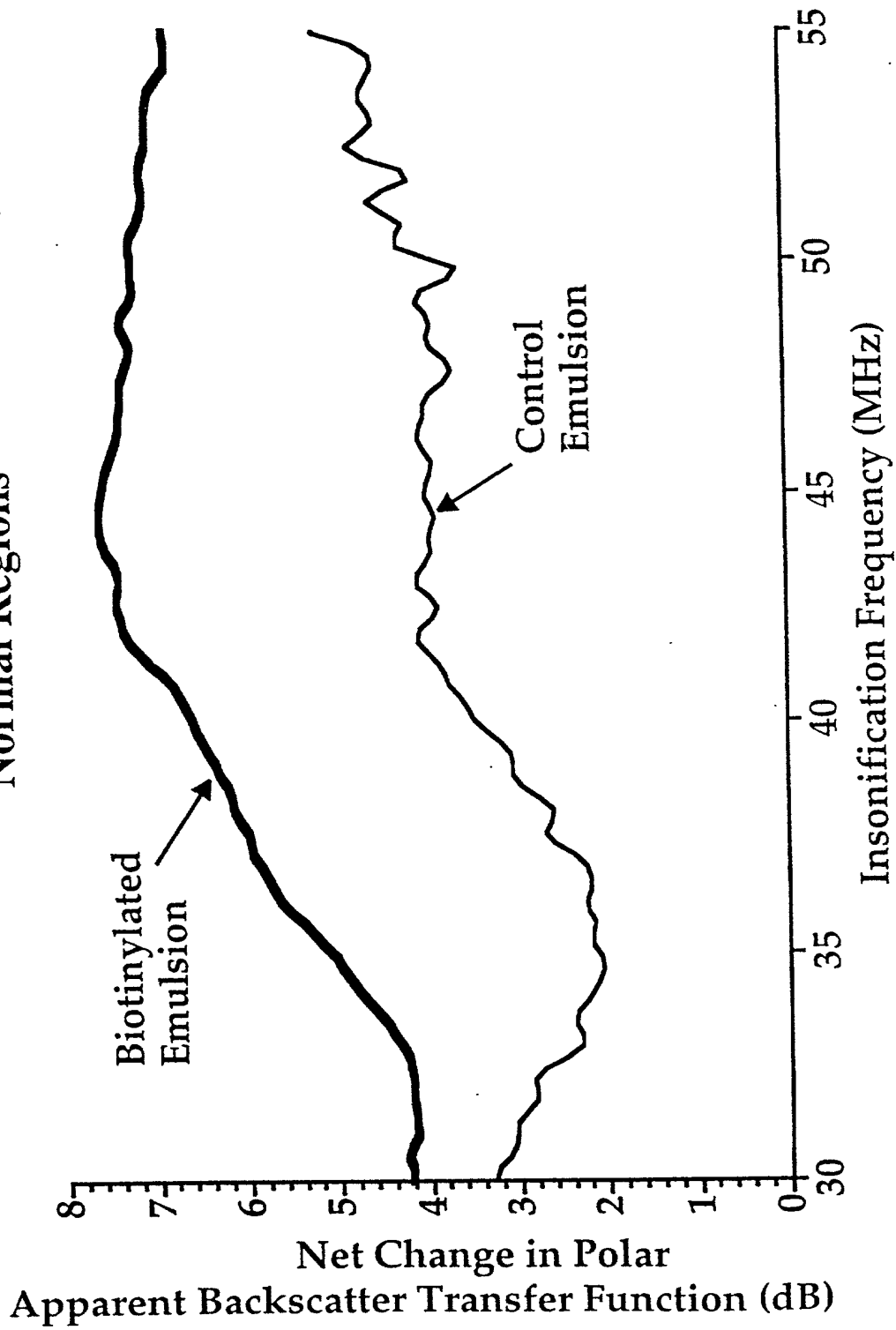


FIG.13 Net Change in Integrated Backscatter between Normal Prostatic Stroma and Cancer Regions for Control versus Biotinylated Perfluorocarbon Emulsions

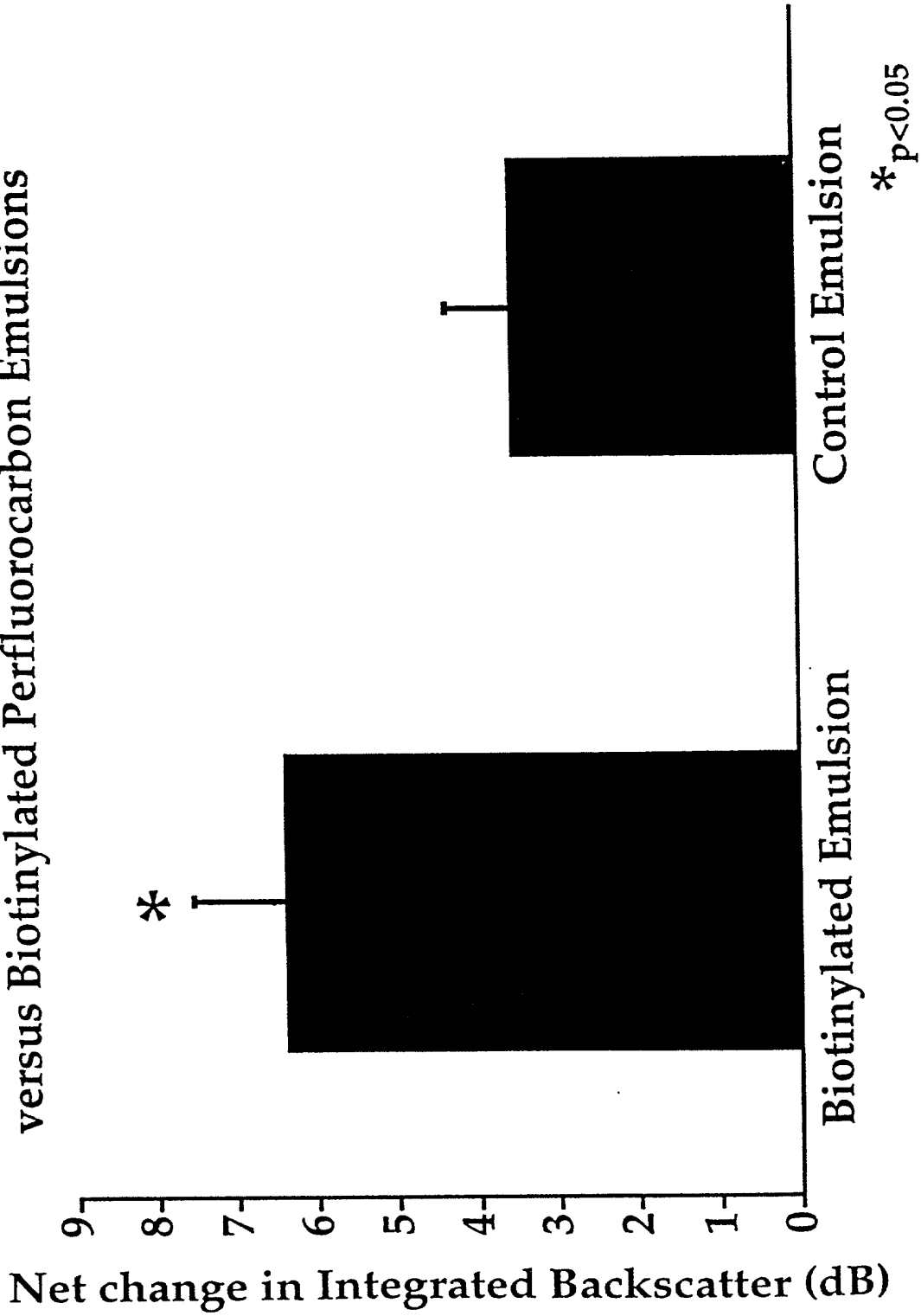


FIG. 14 Net Change in Apparent Backscatter Transfer Function of Biotinylated and Control Perfluorocarbon Emulsions Targeted to OC-125 Antigen in Ovarian Carcinoma Relative to Normal Regions

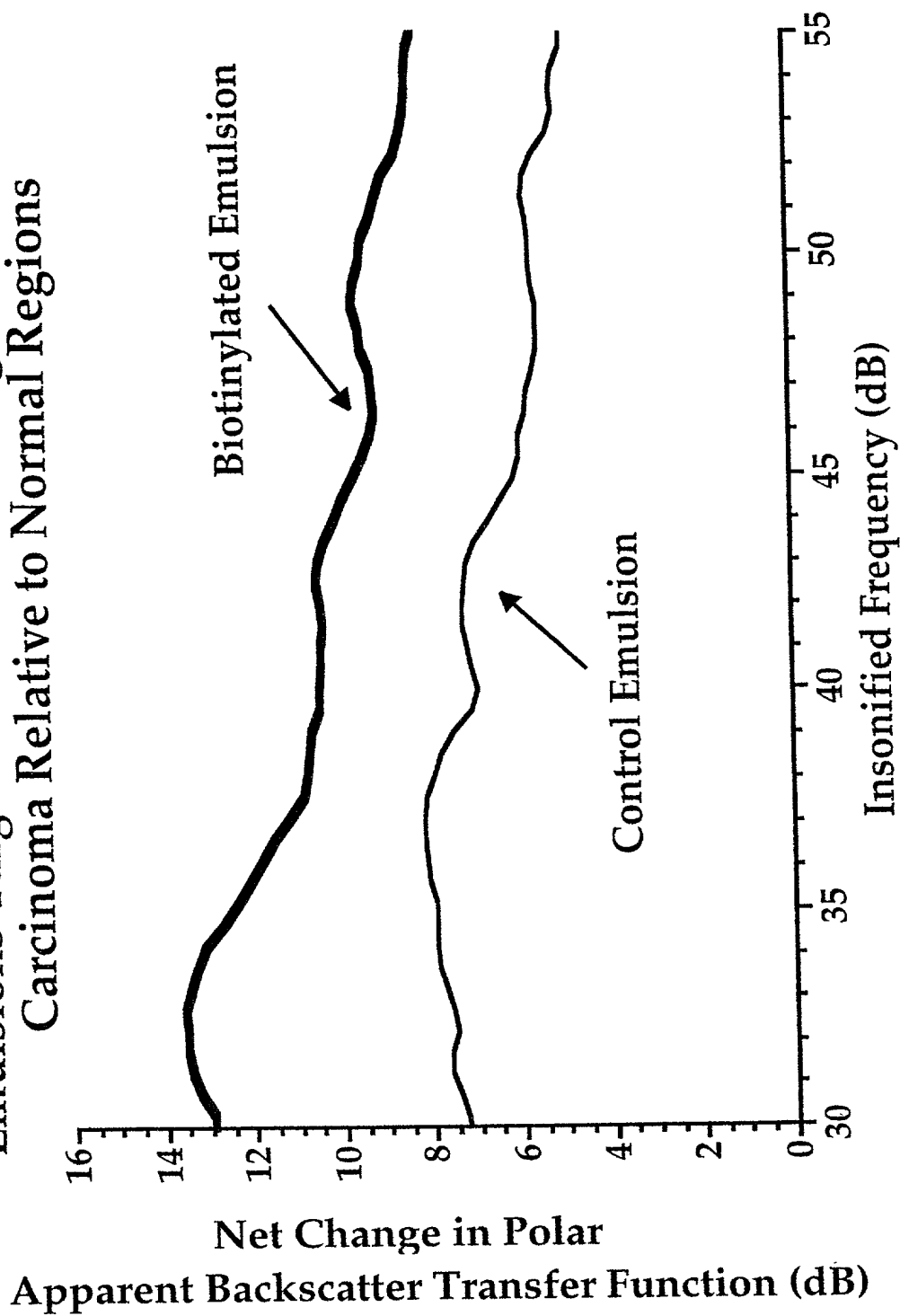
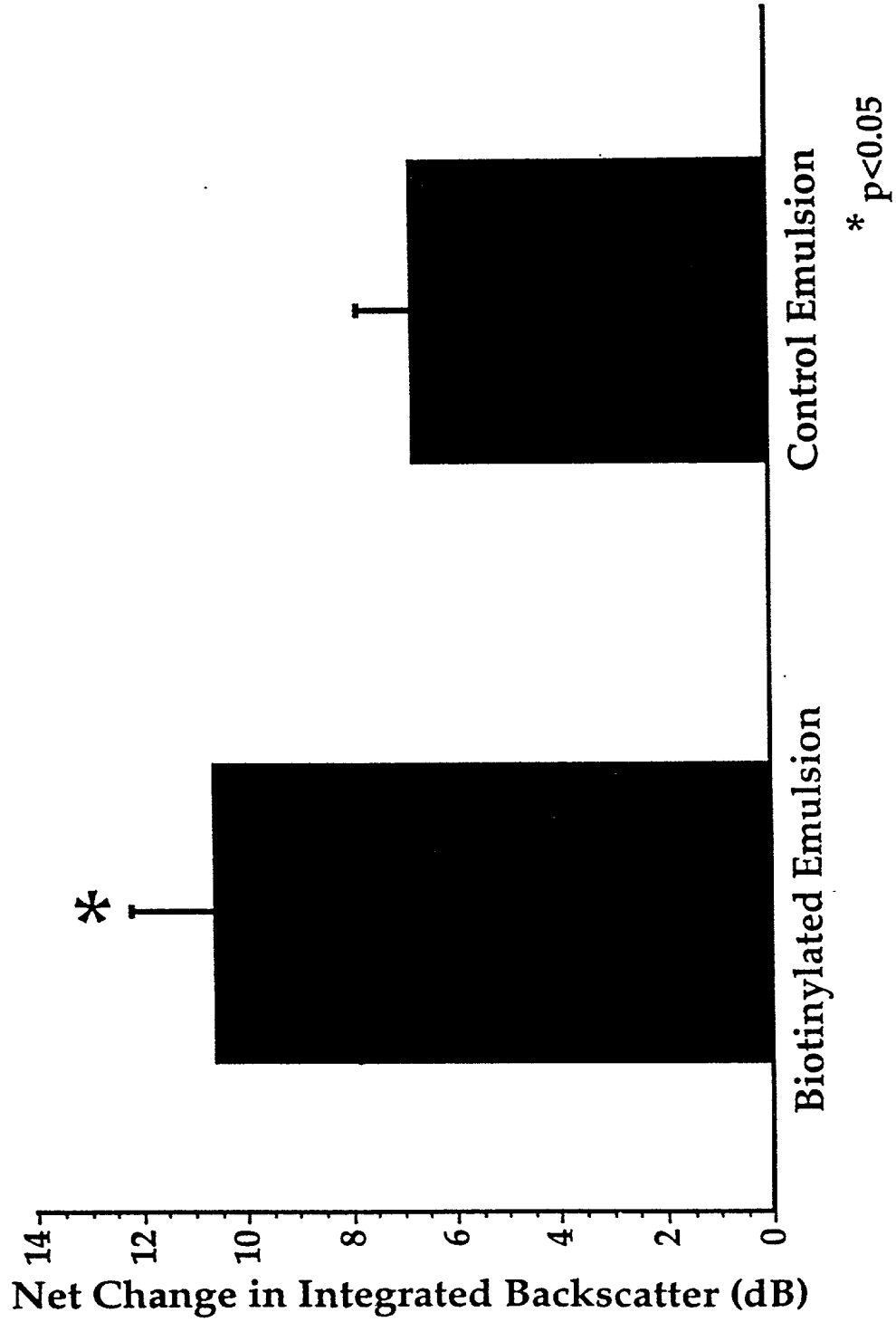
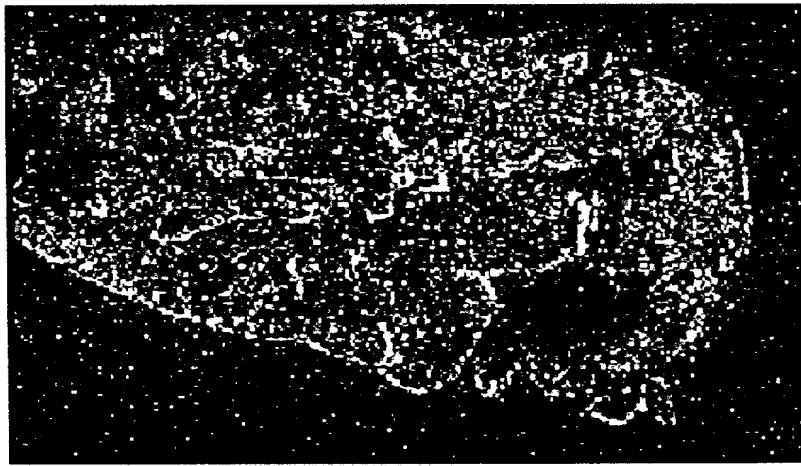


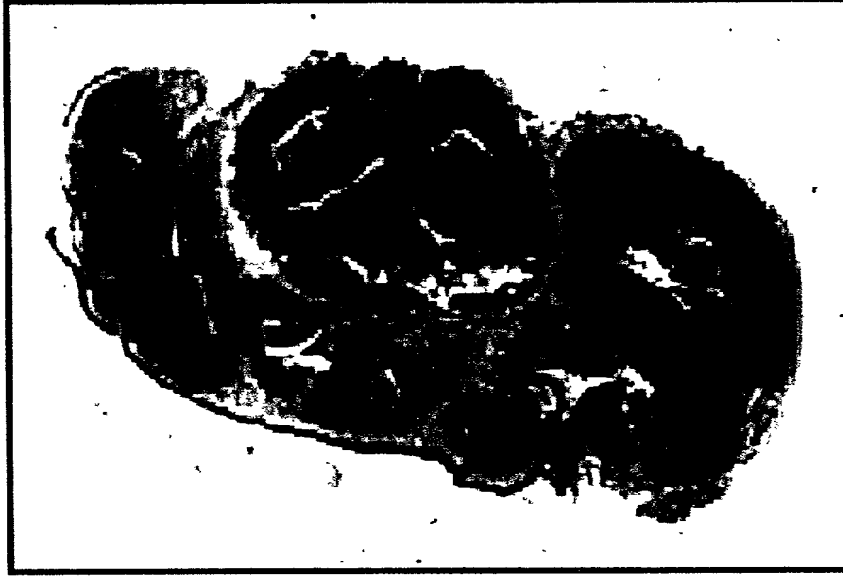
FIG. 15 Net Change in Integrated Backscatter Between
Normal Ovarian Tissue and Carcinoma Regions for
Control versus Biotinylated Perfluorocarbon Emulsions



**Figure 16. Comparison of Ultrasonic and Optical Images of Tonsil
Using Perfluorocarbon Contrast and Horseradish Peroxidase
Targeted to Epithelium with Anticytokeratin Antibodies**

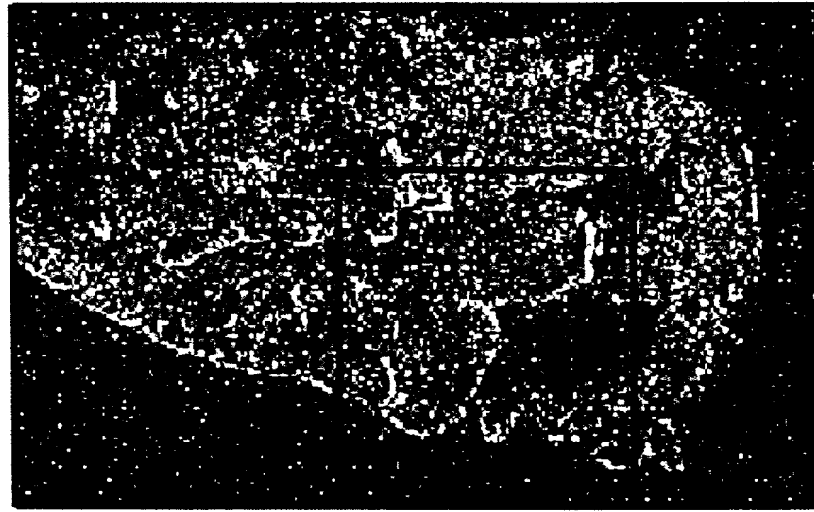


**Peak Detected Image
100µm step size**

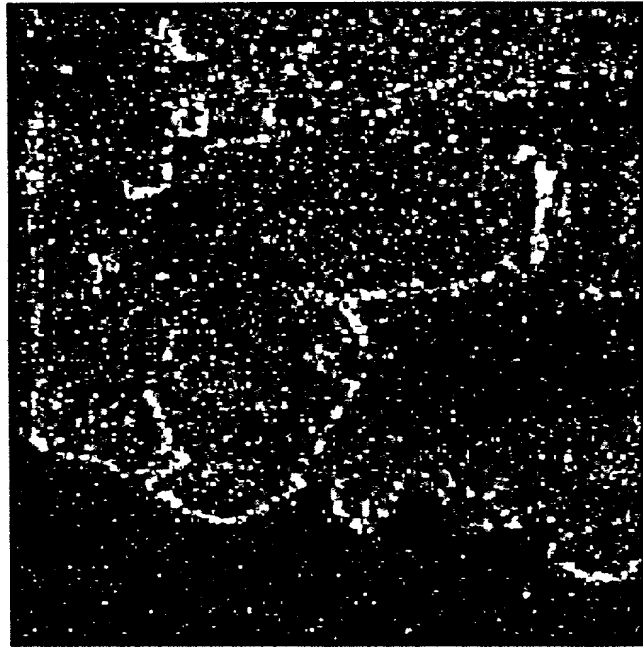


Immunostained Tonsil

Figure 17. Peak Detected Ultrasonic Radiofrequency Images of Tonsil Epithelium Acoustically Enhanced with Anticytokeratin Antibody Targeted Perfluorocarbon Emulsion



**Peak Detected Image
100 μ Step Size**



Zoom: 50 μ step size

FIG. 18

Backscattered Power from Plasma Clots after One-step Fibrin Targeted Emulsion

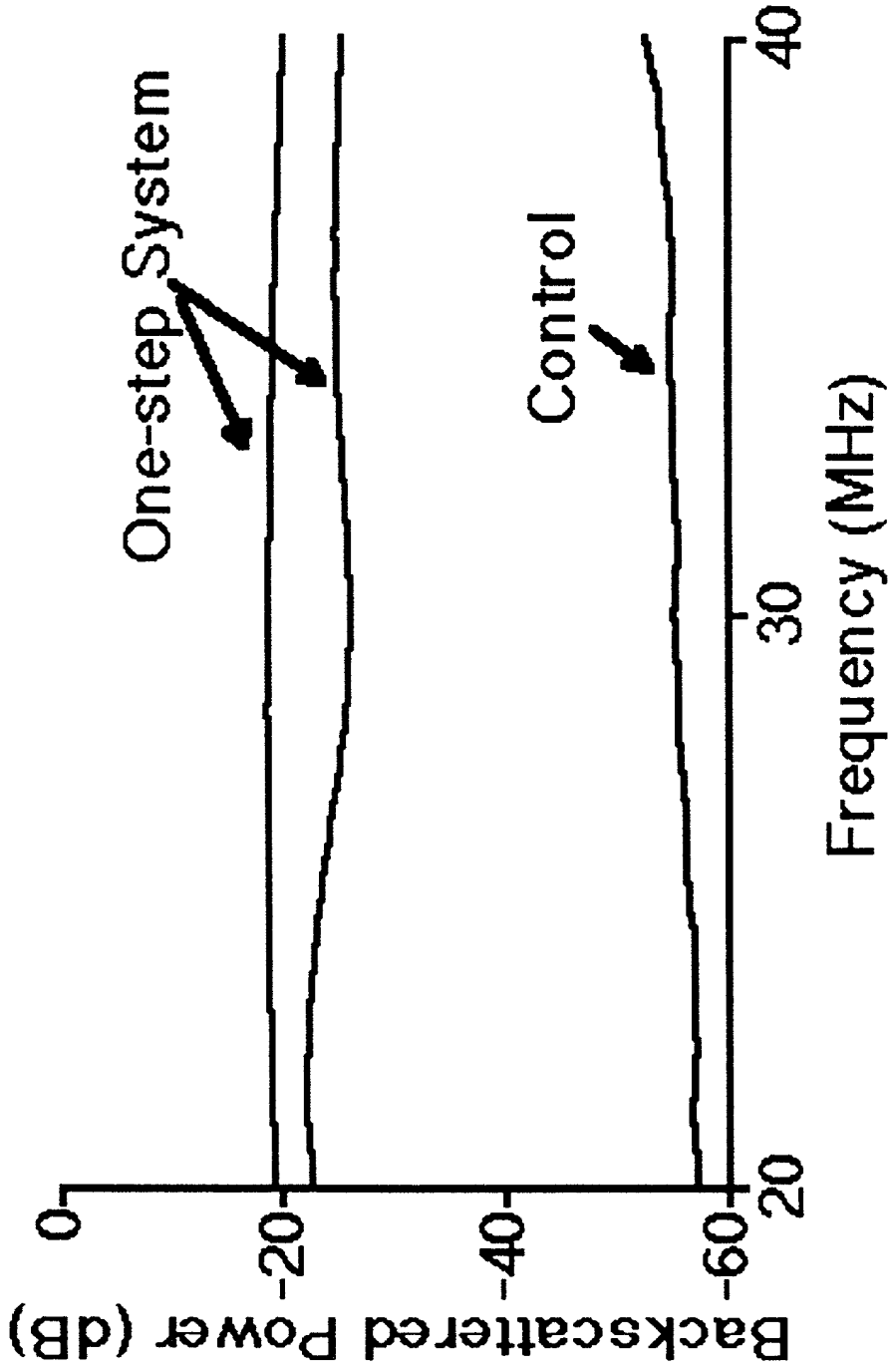


FIG. 19

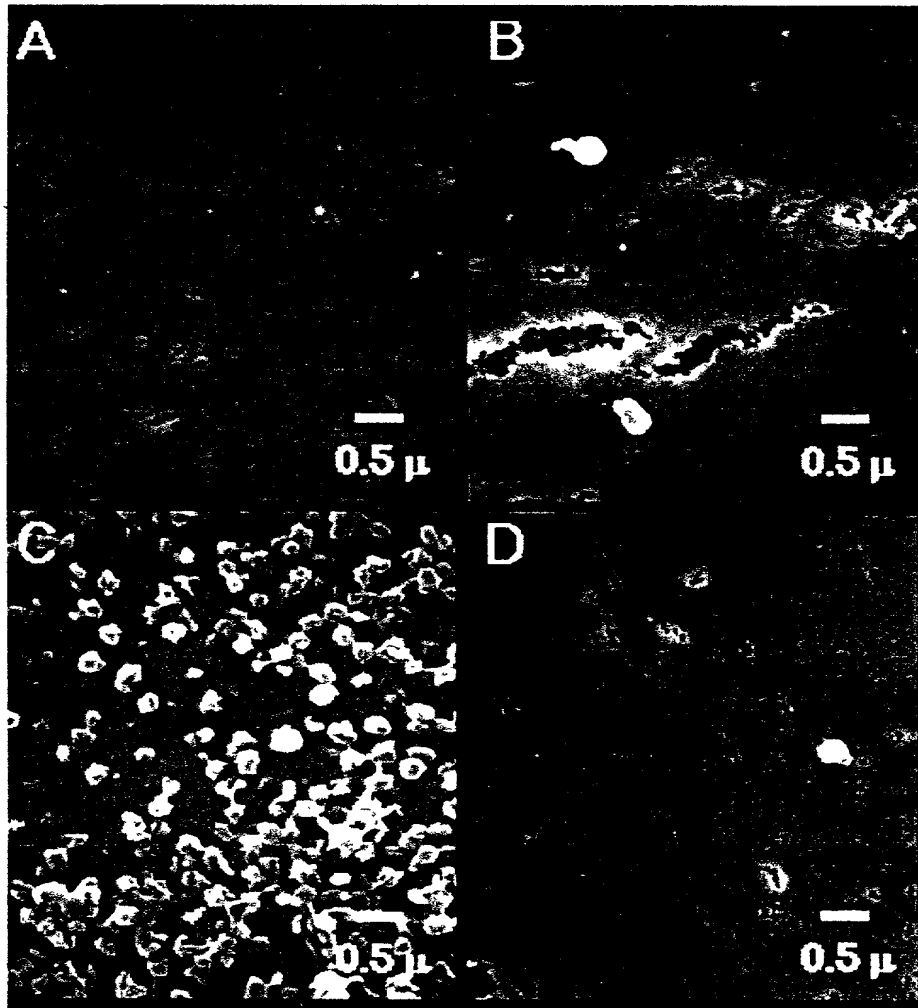


FIG. 20

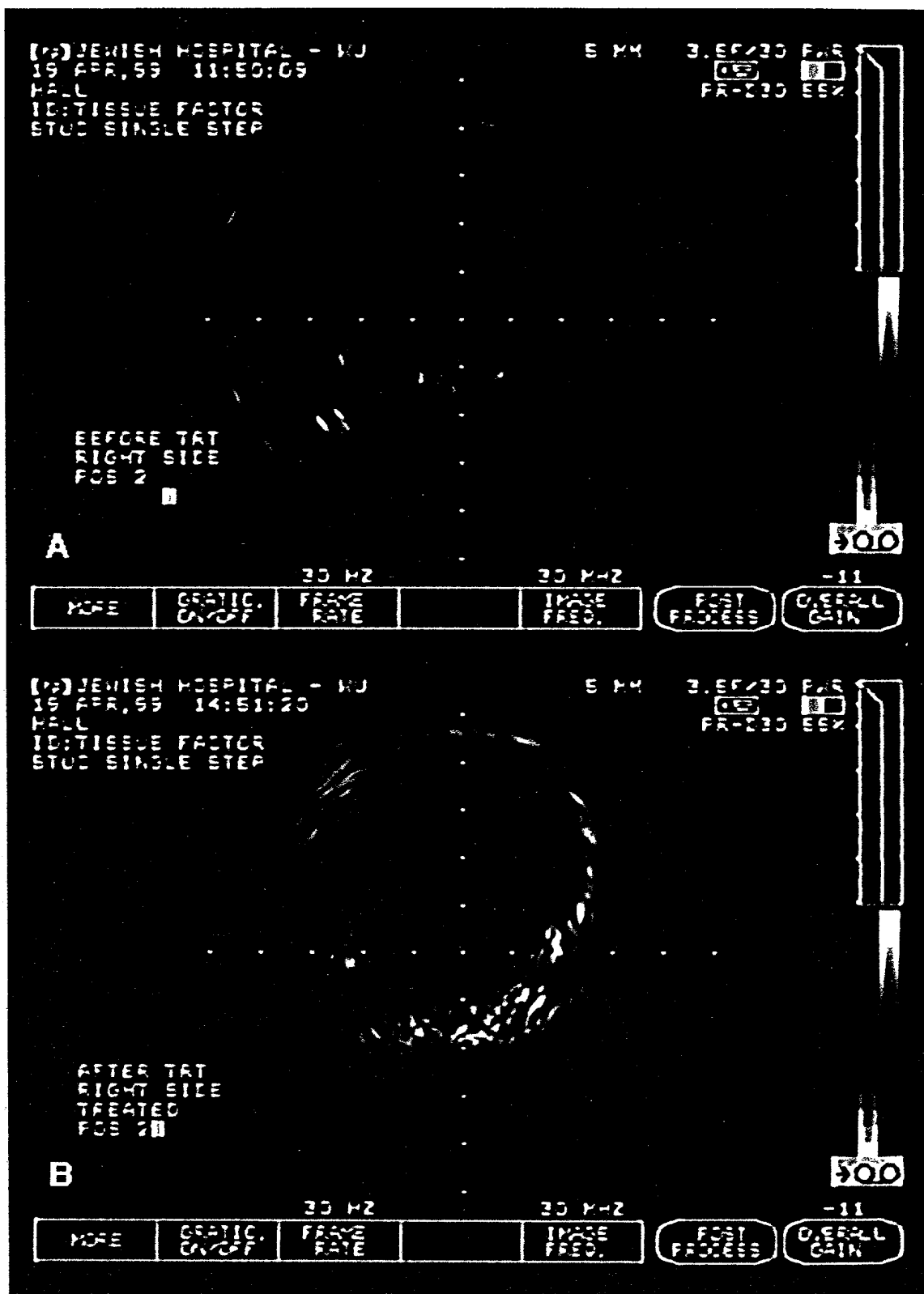


FIG. 21

